DOCUMENT RESUME

ED 369 997 CE 066 595

AUTHOR	Cappelli, Peter
TITLE	British Lessons for School-to-Work Transition Policy in the U.S. EQW Working Papers 19.
INSTITUTION	National Center on the Educational Quality of the Workforce, Philadelphia, PA.
SPONS AGENCY	Office of Educational Research and Improvement (ED), Washington, DC.
PUB DATE	93
CONTRACT	R117Q000011-91
NOTE	31p.
PUB TYPE	Information Analyses (070)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Adolescents; Apprenticeships; Economic Development; *Education Work Relationship; Employer Attitudes; Employment; Foreign Countries; Incentives; *Job Training; *Labor Force Development; Public Policy; School Business Relationship; Unemployment; *Work Experience Programs; *Youth Programs
IDENTIFIERS	*Great Britain; *Youth Training Scheme

ABSTRACT

Britain has attempted over the past decade to develop German-style youth apprenticeships through its Youth Training Scheme (YTS). YTS has the basic attributes considered essential to bridging school and work. The greatest achievement of YTS is that large numbers of employers were persuaded to provide work experience positions on short notice, and YTS was able to become a massive program very quickly. Employers have been willing to participate because the flexible and decentralized nature of the program imposes only a minor administrative burden and YTS provides help in screening new hires for entry-level jobs. The main benefit from YTS is that it helps school leavers secure permanent jobs. Unfortunately, the goal of securing jobs has conflicted with the goal of providing skills, with as many as 80 percent dropping out to take full-time employment with the employer providing the work experience. Although one goal was to help employers move toward more efficient and flexible operating systems based on higher-skill, broader jobs, YTS may actually have created incentives that retarded efforts to reform work since it provides employers with a steady stream of virtually costless new trainees. Lessons for the United States include the need for employer incentives to provide high skills and to introduce new, more flexible and efficient systems of organizing work by raising the skill levels in the work force. Appendixes include 22 footnotes. Contains 76 references. (YLB)

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ED 369 997

British Lessons for School-to-Work Transition Policy in the U.S.

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CE066595

"British Lessons for School-to-Work Transition Policy in the U.S."
by Peter Cappelli (Co-Director National Center on the Educational Quality of the Workforce)
EQW Catalog Number: WP19

Dr. Cappelli would like to thank the Centre for Economic Performance at the London School of Economics for research support and to Ewart Keep, Paul Osterman, Jim Rebitzer, and Joan Wills for helpful comments.

The work reported herein was supported under the Education Research and Development Center program, agreement number R117Q00011-91, CFDA 84.117Q, as administered by the Office of Educational Research and Improvement, U.S. Department of Education. The findings and opinions expressed in this report do not reflect the position or policies of the Office of Educational Research and Improvement or the U.S. Department of Education.

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Executive Summary

British Lessons for School-to-Work Transition Policy in the U.S.

by Peter Cappelli

Britain has attempted over the past decade to develop German-style youth apprenticeships through its Youth Training Scheme (YTS). The lessons from that experience can help inform the current debate about school-to-work policy in the U.S. The most important lesson concerns the role that employers must play in school-to-work programs and the need to create incentives so that their actions do not conflict with the overall goals of the program.

YTS had the basic attributes that are seen as essential to bridging school and work. It was targetted at school leavers between ages of 16 and 18 who were not going on to higher education, offering them an integrated program of formal classroom education and work-based learning that was designed to develop vocational skills. The participants worked toward achieving nationally recognized skill credentials. They received a stipend from the government while participating and were exempt from various labor law protections (except safety legislation) in order to reduce the administrative burdens on providers.

The programs were developed at the community level and could be run by a variety of organizations—employers, further education colleges (similar to community colleges), and by for-profit "Private Training Organizations," much like proprietary schools, that typically subcontracted with several employers to arrange work experience. YTS providers received a subsidy from the government to cover training and education expenses, including the costs of work-based training, and agreed to meet standards in their education and training programs. While the organizations providing work experience sometimes paid the trainees a wage when labor markets were tight and trainees were hard to find, they were not required to do so.

Experience with YTS

The greatest achievement of YTS is that large numbers of employers were persuaded to provide work experience positions on short notice, and YTS was able to become a massive program very quickly. Within two years of its inception, one-quarter of all 16-year-olds in England and Wales were in YTS programs.

Employers were willing to participate in part because the flexible and decentralized nature of the program imposed only a minor administrative burden on them. But the main reason for participating was the help YTS gave

in screening new hires for entry-level jobs. Three-quarters of the work experience providers, for example, reported that YTS would be their main source for recruiting in the future. By 1988, the unemployment rate for the YTS target age group in Britain had actually fallen *below* that of the more experienced 20- to 24-year-old age group: the only other O.E.C.D. country with that experience was Germany, whose youth apprenticeship program Britain was attempting to copy. Far and away the main benefit from YTS is that it helped school leavers secure permanent jobs.

Unfortunately, the goal of securing jobs conflicted with the goal of providing skills. When labor markets were tight, as many as 80 percent of YTS participants dropped out of the program before completing it, most to take full-time jobs with the employer who was providing their work experience. Employers already knew by observation what their trainees were capable of and were not interested in having them secure credentials. And YTS credentials in practice did not help in securing jobs elsewhere. Only 42 percent of employers even asked job applicants whom they knew had participated in YTS whether they had earned any credentials. Small employers in particular often viewed the in-classroom education as a nuisance, no doubt because releasing the trainees for it disrupted the work flow in small shops.

There is a clear sense that the work experience on offer typically did not demand or teach many skills. The most common response from employers who were asked why they did not participate in YTS was that they had no work experience suitable for training. More generous subsidies were offered for higher-skill programs, but most of the expansion of training that YTS generated was nevertheless at the bottom end. Forty-one percent of YTS placements, for example, were in retail, a low-skill sector.

Evidence from a comparative study of YTS participants and German apprentices indicates, however, that those in YTS actually developed more work-relevant skills and abilities than did their German counterparts because they were thrown immediately into real work tasks. Those skills were not, however, the academic-based and general-work skills associated with occupational credentials. They tended to be general comportment and job-specific skills. Indeed, the major employer complaint with YTS was with the program monitors who tried to enforce standards, pushing the work-based training toward general skills and away from firm- and job-specific experiences. There is also evidence that when labor markets were tight, employers used higher levels of training to compete for YTS participants.

YTS has been slowly scaled back and is due to be replaced by 1996 with a voucher system where school leavers shop for training places. The most important reductions have been in the subsidies for providers that were cut on the theory that since employers received the benefits of training, they should absorb the costs. The reduction in youth unemployment associated with the passing of Britain's "baby boom" also eroded support for YTS. Further, the Conservative Government was never entirely comfortable with the level of intervention in the workplace that YTS produced. And once the subsidies were cut, employers' interest in and support for the program declined.

Lessons for the U.S.

The first general lesson from YTS is that potential trainees and potential providers can be mobilized almost immediately by a government program that creates the right incentives. Allowing for-profit managing agents to put together the disparate elements needed for a program seemed to work quite well in Britain and might work even

better in the U.S. where for-profit proprietary schools already perform somewhat similar roles. Relying on established business or education networks may not be necessary.

The second lesson concerns what those incentives are. For employers, the incentive they may value most is the ability to screen for new hires. The main problem facing school-to-work programs is that a great many jobs are organized around internal labor markets where workers are hired into entry-level jobs that require little skill: the workers then learn skills on-the-job that make promotion within the firm possible. Both employers and participants in YTS saw their main goal as filling those entry-level jobs. So neither had much interest in the skills and credentials offered by YTS, which went beyond what those entry-level jobs required. Employers pulled participants out of YTS and into those jobs, and the trainees went willingly. The fact that a participant actually completed YTS was often a signal that the firm did not think that the trainee was good enough to keep, so a completion credential was almost a negative signal about the trainee.

These arguments suggest that the goal of getting trainees into jobs and the goal of raising skill levels above the minimum needed for entry-level jobs can be in conflict. Programs that are not tied to specific jobs, that try to develop skills far beyond what the entry-level job requires, create greater incentives to pull trainees out of the programs and into jobs. The solution to this problem in Germany is to prohibit work experience providers from hiring their trainees until they have completed the training program, but there may be other, less restrictive arrangements for aligning these two interests (see below).

The second and related lesson concerns the incentives for employers to provide substantive training once they decide to participate in school-to-work programs. Subsidies of the kind used in YTS create an agency problem: pay providers first and then hope that they offer the right kind of work experience. Employers can always earn higher returns in the short run by restricting expensive training and focusing the trainees' time on what is by definition unskilled productive work. Arrangements where trainees essentially pay for the training through lower wages does not fundamentally change the problem. The YTS experience suggests that trying to ensure quality by monitoring the training component of work experience is a daunting task.

A better system would relate subsidies to the *completion* of credentials that measure skills acquired. Ideally, subsidies could be paid to the employer in the form of a wage premium over some fixed period for each trainee who achieves the desired skill credentials: the employer can then pay a wage below the value the skills produce (their marginal product), recouping the costs of training, while the addition of the wage premium provides the employee with a total wage high enough to keep them from leaving. This arrangement eliminates the disincentive employers have to provide the "general skills" that transfer elsewhere—i.e., walk out the door most easily. Turnover is arguably the main constraint on employer-provided training, and any arrangement that reduces turnover should lead to an overall expansion of training.

The third lesson concerns the broader goal of school-to-work programs, to help ease the introduction of new, more flexible and efficient systems of organizing work by raising the skill levels in the workforce. The phrase "high performance" work is often used to describe these new arrangements which rely on team work and employee involvement as substitutes for management control systems. The incentives created by school-to-work programs like YTS, which make unskilled trainee labor essentially free and reduce the costs of turnover for these workers (a steady supply of new trainees), may work in the opposite

direction by making it cheaper to operate unskilled, high turnover production systems that run counter to high performance systems.

Where school-to-work programs can help ease the introduction of more effective work systems, it is likely to be because of skills learned in the classroom, not in work experience. What firms can offer for work experience is their status quo which is often a traditional work system. The fact that such experience can even be a hinderance in learning new systems is illustrated by the "greenfield" strategy pursued by many employers of staffing new, innovative facilities with workers who have no prior experience in that industry—no expectations and habits that need to be undone. Classroom instruction, in contrast, can focus on basic skills that transcend specific work systems, including the systems that will inevitably replace "high performance" approaches.

British Lessons for School-to-Work Transition Policy in the U.S.

Introduction

The growing interest in policies that might improve U.S. economic competitiveness has increasingly focused on the skills of employees and the training and education systems that provide those skills. These arguments have contributed to an explosion of interest in models that raise workplace skills by integrating classroom and work-based learning along the lines of apprenticeship programs. The British experience with a nationwide school-to-work program suggests important lessons for the U.S. The most important lesson concerns the role that employers must play in school-to-work programs and the need to create incentives to align their interests with the overall goals of the program.

Skills and the Economy

Arguments for a relationship between economic competitiveness and skills typically take the following form. In the absence of adequate skills, it is argued, employers may adjust to a "low-skill" equilibrium, producing products with low-skill, "mass production" techniques where quality is lower and the ability to adjust to changing markets is also reduced. Such products compete on price, facing tough competition from low-wage, developing countries. A "high-skill" equilibrium, in contrast, has flexible production based on higher skills that is tailored to changing markets. The products that result are of high quality and command price premiums that, in turn, support payment of higher wages. This argument has been put forward since the early 1980s in the U.K. and more recently in the U.S.[1]

Both the interest in raising general work skills and discussions about arrangements for doing so have been driven in the U.S. by comparisons with foreign systems. Perhaps most of the attention has been given to Germany and the Scandinavian countries on the reasonable grounds that their economies appear strong and offer high wages, that their production systems are based on high skills, and that they have youth training programs that produce high levels of general work skills. The training arrangements are based around youth apprenticeships, which integrate classroom and work-based learning. A range of policy statements in the U.S. have suggested that we should borrow explicitly from the apprenticeship model.[2] The

attention has focused on bridging arrangements that are aimed at students who go straight to the labor force, the group sometimes known as "the forgotten half" (Grant Commission 1984) in the U.S.[3]

The essence of these "school-to-work" programs is to integrate on-the-job work experience into the students' education first by offering classroom curricula that include work-related material and second by ensuring that some structured, work-based learning takes place on the job. The assertions above about skills and competitiveness center on low levels of general work skills that appear to be best learned in the context of work experience. These skills can be thought of as using academic concepts as a foundation that is applied to work problems (see SCANS 1992 for a U.S. description). School-to-work programs are also driven by the belief that academic material can best be taught in the context of real applications, especially to students who have difficulty learning. Finally, these programs may reduce youth unemployment directly by matching students with jobs while in school, reducing the frictional unemployment associated with job search.

Within the general category of school-to-work programs are an assortment of plans which include: traditional co-op programs where students alternate between regular, paid jobs and the classroom; career academies which feature occupation-specific curricula within a larger high school; and tech-prep aimed specifically at technical jobs, where the academic program combines the last two years of high school and two years of community college (see Stern et. al. 1993 for a summary of these programs and their impact). The most attention, however, has been given to youth apprenticeship programs, which emphasize skill credentials on completion of the program and paid work experience. Legislation enacting youth apprenticeship programs has recently been signed in Arkansas, Oregon, Pennsylvania, and Wisconsin, and federal legislation has been introduced recently in Congress.[4] A range of organizations has been active in promoting youth apprenticeships.[5]

The main difficulty in establishing programs for bridging school and work is the severe shortage of employers willing to provide a setting for work experience that will provide high quality training. Finding employers who can also pay their student workers a wage while they work and learn restricts the set even further. Earlier experience with demonstration projects designed to find work experience for disadvantaged youth found that even at a full wage subsidy, it was difficult to find employers who would participate, and participation dropped off sharply when employers had to pay something to the participants (MDRC 1981). The youth apprenticeship programs operating at present are all subsidized and are incredibly small as a result: the entire Pennsylvania state program has about 100 students, while the Wisconsin program has about half that number (see Stern et. al. 1993 for the participation levels of all the major apprenticeship programs). Indeed, one major category of school-to-work programs, school-based enterprises, exists basically because of the difficulty in finding and managing work-based experiences; school-based enterprises create businesses in the schools on the order of junior achievement programs to generate work experiences for students.[6]

The difficulty in finding employers that will provide work experience turns on the economic incentives associated with providing general work skills. As Becker (1975) made clear, because general work skills are equally useful to a range of employers, they raise workers' market wages—the wage the employer providing general training must pay as well. Employers are therefore reluctant to provide general skills training themselves because they cannot recoup the costs of training through the typical

route of paying wages below the value that trained workers produce—their marginal products.

The Limits of International Comparisons

As noted above, much of the motivation for the interest in school-to-work programs comes from foreign comparisons. There are, of course, many difficulties in making comparisons with foreign systems. The first is sorting out the effects of training programs per se from the effects of other forces in the economy. It is very difficult to learn much about this question from countries like Germany where the youth training system has essentially been in place for hundreds of years. Because high-skill work and high economic performance have grown up together, the direction of causation cannot easily be identified. Did the apprenticeship programs and the skills they produce help push firms toward high skill production, did high-skill production create the demand that pushed apprenticeship programs along, or were the two independent?

These questions lead to the second, counterfactual issue of how programs would operate if transplanted to the context of a different labor market. Apprenticeships and programs like them that bridge school and work must fit into the school and work environments that they bridge. The nature of the labor market and of employment practices in it—especially hiring and training practices—provide arguably the most important factors shaping how these bridging arrangements will work because they determine how employers will respond. Streek (1988) argues, for example, that one reason German and Scandinavian employers invest more in training is that they cannot make easy use of the external labor market to acquire new skills and dispose of obsolete ones. In general, labor markets where turnover is low facilitate general skills training because employers can recoup investments in training over an employee's lengthy tenure. Prohibitions on hiring apprentices in Germany and agreements among employers not to pay the higher wages needed to "poach" each other's workers serve this purpose (see Hamilton 1990).

Several characteristics of the U.S. labor market and of employment practices here make school-to-work programs more difficult to sustain. First among these is the high rate of employee turnover. Bishop (1992) compiled comparative data on employee tenure and concludes that the U.S. has the highest rate of labor turnover in the industrialized world, especially for young workers. It becomes more difficult for employers to train workers when they do not stay around so that the investment can be recouped. Having the trainees "pay" for the work-based learning while they receive it through lower wages does not seem popular. Subminimum training wages appear to be used only rarely (Katz and Krueger 1992).

The structure of the labor markets around which jobs are organized is another characteristic that influences youth training arrangements. Where labor markets are organized around clear occupational lines, as exemplified by skilled trades, it is easier to establish required skills and credentials for measuring the attainment of those skills because the jobs are stardardized, not specific to firms, through the influence of common technology, trade union influen, e, etc. It is also easier to think about the appropriate levels of skill from the perspective of the economy as a whole, independent from what employers currently demand. The fact that Germany and the Scandinavian countries have labor markets that are uniquely organized along occupational lines certainly facilitates their apprenticeship systems.

Labor markets like those in the U.S. are not as clearly organized around occupations, and many jobs are structured around internal labor markets. Internal labor market jobs are more difficult to integrate into formal programs to bridge school and work because skill require-

ments and work experience are more specific to each employer, making it difficult to introduce standardized programs and systems of credentials. And there is no obvious institution for establishing skill requirements independent of what employers currently demand. These issues are central to the comparative arguments developed below.

Britain as a Comparison. Britain's efforts to introduce apprentice-style bridging programs during the 1980s are particularly instructive for the U.S. and may ultimately be more useful than the comparisons with Germany and Scandinavia. Britain has experienced many of the same youth employment and skill problems that are currently the focus of debate in the U.S. These include concerns about youth unemployment,[7] employer complaints about a shortage of skilled workers especially for craft and semi-skilled jobs,[8] the belief that the "forgotten half" of students are the root of the skills problem,[9] levels of employer-provided training well below those of other competitor nations (indeed the general belief that employers for some reason train below even their own needs[10]), and the belief that low skill levels are not only causing short-run bottlenecks in production (MSC 1988) but also are keeping the economy from adopting new, more effective systems of work organization (see below).

International comparisons have driven the concern about skill levels in both countries. In the U.S., the comparisons have had more to do with educational performance (e.g., "Nation at Risk" 1983) but have included some comparisons of production efficiency and work organization, especially in the auto industry, which show superior performance for Japanese firms (Womack et al. 1992). In Britain, comparative studies by the National Institute for Economic and Social Research (NIESR) of firms in the U.K. and competitors in other European countries consistently found the British firms operating with both lower skills and lower productivity, especially as compared to Germany (see, for example, O'Mahony 1992). These studies seem to have been instrumental in persuading Britain to look at training systems of the German model.[11]

The fact that Britain is more similar to the U.S. in ways that are relevant to employment makes it easier to transfer lessons back to the U.S. In contrast to Germany, the Scandinavian countries, or Japan, Britain has labor markets and employer hiring practices that increasingly look like those in the U.S. Employee turnover is much closer to levels in the U.S (see Bishop 1992), and employers frequently hire skilled workers away from each other. A recent survey, for example, concludes that roughly eight percent of British employers meet their skill needs entirely by hiring trained workers away from other employers (Training Agency 1989, p. 42). The sharp decline in union density (from 57 percent in the late 1970s to less than 37 percent at present), the rise of enterprise-based bargaining, and legislative weakening of union power have also substantially deregulated the labor market in terms of hiring practices and wages,[12] making Britain increasingly like the U.S. Britain may have the least regulated labor market in the European Community as evidenced by its continued resistance to adopting the Community's Social Charter and its protections for labor.

The main institution for facilitating the transition between school and work in the U.K. traditionally was union apprenticeships. Their rapid decline beginning in the 1970s (see below) left Britain—like the U.S.—with few institutional arrangements for providing youth training or for smoothing the transition from school-to-work.

The main reason for looking to Britain for lessons is that it introduced programs that attempted to *change* training practices from ones roughly like those in the U.S. toward practices that looked like Germany's. The attempt to change practices constitutes an experiment that helps

sort out the real effect of training practices on employment from other factors. That experiment provides some of the most powerful answers yet about what might happen if the U.S. introduced German-style, school-to-work programs for youth training.

The Contemporary British Experience

Concerns that poor education and skill levels relative to competitor nations were hurting Britain's competitiveness go back at least to Victorian times. The Royal Commission on Technical Instruction reported in 1875, for example, that Britain was falling behind other nations in education—in science and technical training in particular—and that the decline would eventually hurt economic development.

The British education system has historically been organized in ways that did not accomodate employment-based interests.[13] Instead, education and training for work centered almost entirely on apprenticeship programs. Most apprentices were in heavy industry where training was based on the existing system of work organization—narrow jobs based on scientific management. The apprenticeships were typically five years, and perhaps because there was not always much to learn in order to prepare for these jobs, progression up the apprenticeship hierarchy was based on time served, not skills acquired. There were rarely tests to certify skills, which contributed to the fact that apprentice credentials did not necessarily transfer across employers. Unions typically controlled the programs. A given union in a plant represented a very narrow set of jobs, and the unions worked to maintain the boundaries between other jobs. There was no point, therefore, in teaching broad or general skills that went beyond what was needed for one's current task (see Williams 1957).

Employers voiced a number of complaints about the apprenticeship programs. First, they complained about a general shortage of participants and union restrictions (such as entry age limits) that reduced numbers; Ainley and Corney (1990, p. 14) note that dropouts from apprentice programs had been rising through the 1960s and 1970s. Second, employers complained about poaching, mainly by small employers. Third, they argued that too much of the apprentice programs amounted to socializing trainees into "the culture of the craft," which they argued were essentially union attitudes. And finally, at least some employers saw the current apprenticeship programs as reinforcing the narrow job demarcations that the employers were hoping to broaden (see Lucie-Smith 1981 for employer complaints; McKinlay 1991 for more general problems with apprenticeship skills).

Perhaps because the trade unions held sway over the Labour party and were at best ambivalent about changing the apprenticeship and training status quo, the first of the reform efforts began in the conservative MacMillan Government whose National Joint Advisory Council (1958) outlined the problem of coming youth unemployment associated with the baby boom and the need to ensure an adequate skill supply for industry. The report helped create the 1964 Industrial Training Act, the first real government initiative in the training area. It set up tripartite Industrial Training Boards (ITBs), one for each industry, to enforce a system of training grants in each industry that were funded by a payroll tax on that industry. Employers providing what the Board saw as adequate levels of training received the grants. The fact that non-training firms were subsidizing the programs of training firms helped to offset the transfer of resources in the other direction caused when skilled employees left the training firms for jobs with the non-training employers.

The ITBs served to expand training (see Lees and Chiplin 1970 for evidence), including apprenticeships that reached their peak density in 1969 with one-quarter of all workers and one-third of all male workers in the 16-18 age group participating (Ainley and Corney 1990, Chapter 9). Thereafter, however, apprenticeships began a slow and steady decline (see below). Keep (forthcoming) finds that apprentices fell from 218,000 in 1970 to 53,600 in 1990.[14]

The combination of Britain's baby boom entering the labor market and the OPEC oil recession gave a new urgency to youth employment policy in the early 1970s that would last for almost two decades. A report by the newly created Training Services Agency of the Department of Employment argued for the importance of teaching students about work to prepare them for it (in contrast to the dominant goal of personal development) and proposed vocational training jointly financed by industry and government, as a permanent "gateway" training program to help students make the transition from school to work (MSC 1975).

Britain began its Youth Opportunities Program in June of 1977, based on a Canadian program of the same name, as a permanent plan for relating youth training and employment. Its main element was the Work Experience on Employer Premises program, designed to provide work orientation skills of the kind associated with work experience. It was also designed to give school leavers some work experience as a way of smoothing the transition to work. Basically, it paid employers to give participants temporary jobs. There were no incentives or mandates to provide training and, as a result, little training occurred.[15]

The Thatcher government arrived in 1979 critical of the existing system of training, especially the Industrial Training Boards, on the grounds that they interfered with employer decision making. It criticized apprenticeship programs in particular for reinforcing narrow, craft-based systems of work organization that needed to give way to more flexible arrangements (CPRS 1980). The Employment and Training Act of 1981 abolished all but seven of the 23 Industrial Training Boards. And training levels fell; Marsden and Ryan (1991) argue that the sharpest decline in apprentices came after this decision.

Youth unemployment rose sharply again in 1981, and the government responded with a permanent plan that would address both youth training and unemployment. The proposal was for a new type of apprenticeship program that would teach broader skills that were portable across employers (MSC 1981). As then Minister of Employment Norman Tebbit argued, the program was also a way to help reform work organization in Britain—of using broad skill training to help eliminate the job demarcation issues that were seen as retarding "flexibility" in industry (Tebbit 1982).

The Youth Training Scheme

A new program known as the Youth Training Scheme (YTS) was introduced in 1983 to address these goals and soon became a national youth apprenticeship program. YTS provided general work skills through programs that integrated classroom and work experience for school leavers between the ages of 16 and 18. Locally based, Area Manpower Boards oversaw specific YTS programs, which combined work experience and employer-based job training with off-the-job classroom education.

Private employers could run their own YTS programs as could local governments and non-profit agencies. For-profit "Private Training Organizations," roughly like proprietary schools in the U.S., could also run programs. They arranged for work experience by subcontracting with firms, typically small employers. Trainees would often rotate across several small employers in order to get the

necessary breadth of work experience. As many as one-quarter of the YTS participants were served by Private Training Organizations (see Witherspoon 1987). Providers needed to meet a set of prescribed standards to be certified as "Approved Training Organizations" and keep their grants. Off-the-job education was typically provided by Further Education colleges, which sometimes organized YTS programs themselves, using Managing Agents to provide the work experience. In about 20 percent of the cases, the off-the-job education was delivered by the employers, who are typically large with dedicated training facilities (MSC 1989). The Manpower Services Commission was to allocate the overall number of YTS programs and participants across industry and occupation roughly in line with manpower projections for the needs of the economy, but in practice they took whatever the employers would provide.

The program organizers received grants for each participant to defray the costs of training, and the grants were larger for more costly "premium" programs such as computer training. Where employers provided work experience and on-the-job training as subcontractors, they worked out private deals with the program organizers for some share of the grants. The trainees also received living allowances from the government. They were excluded from the protections of anti-discrimination and other labor laws to reduce the administrative burdens of running the programs.[16] The goal of YTS was to have participants work toward earning nationally recognized occupational credentials. The lack of structure among occupational credentials initially hampered that goal until 1986 when the National Council on Vocational Qualifications was established to rationalize the diverse set of existing qualifications.[17] At a minimum, trainees completing the program would receive a "completion certificate." In practice, employers have been given considerable flexibility to tailor programs to their own circumstances. The Training Standards Advisory Service monitored the quality of the programs and provided some training for the trainers.[18]

In 1986, YTS was expanded to a two-year program. The off-the-job training component also expanded from 13 weeks to 20, and the subsidies to employers were reduced.[19]

As compared to school-to-work programs in the U.S., YTS targetted the same age group (16- to 17-year-olds) and provided the core characteristic of an integrated classroom and work-based learning experience. It is like youth apprenticeships in its focus on occupational credentials but differs in that the work experience typically does not pay a wage. Because state schooling finishes in the U.K. for 16 year olds who are not pursuing higher education, YTS cannot literally be school-based in the way that U.S. programs targetting the same age group are. Even though YTS takes students directly from school, the programs are really based at the provider/employer along the lines of German youth apprenticeships. (Some U.S. school-to-work programs, such as Arkansas's, also focus the relationship on the employer.)

Experience with YTS

There have been a number of attempts to assess different aspects of the performance of YTS at different points in time, but as yet there has been no overall assessment. The program's performance can be categorized along the following dimensions: participation, subsitution effects, skills learned, obtaining jobs, changing employer behavior.

Participation. YTS was an enormous undertaking. The government spent £7.86 billion on it between 1983 and 1992. At its peak in 1988, the two-year YTS had 435,000 participants (Cope 1988, p. 143), roughly 16

percent of the 16-18 age group in England and Wales (the one-year YTS had covered more than one-quarter of all 16-year-olds). In the first years of YTS, there was some difficulty in filling positions with trainees. Only 74 percent of the places were taken up in 1984, for example, apparently because more potential participants than expected went directly to jobs (IDS 1984). When the labor market began to tighten in 1988, there were more than 100,000 unfilled YTS places (Cope, 2 February 1988, p. 836) because more school leavers went directly into employment. This situation soon reversed. After 1988, the government guaranteed a place on YTS for all 16- to 17-year-olds but also eliminated the eligibility for unemployment benefits for those in that age group who refused to accept a place.[20] These actions substantially expanded the demand for spaces at the same time that the subsidies were cut. When the economy went into recession in 1990, excess demand for places skyrocketed.

From the perspective of the participants, Bynner and Roberts' (1992, p. 47) surveys of youth find that in tight labor markets, YTS was not popular with school leavers, while in slack markets there was fierce competition to get in. Lee et al.'s (1990) intensive case studies of YTS in one community find that some of the short-fall in positions in slack markets was due to the fact that providers typically operated with fewer participants than their quota allowed when their hiring needs declined: they did not want to train participants whom they would not be able to employ, an issue that is taken up below.

Tracking. One of the concerns about YTS is whether it in practice institutionalized segmented labor markets by tracking "low quality" trainees into "low quality" placements and jobs. Bynner and Roberts (1992) conclude from their surveys that both employers and trainees preferred informal routes to employment rather than YTS. Raffe's (1987) analysis of the Scotland School Leavers Survey found that the most able new entrants to the labor force avoided YTS because it was perceived as low status. Ainley and Corney (1990, p. 89) report that the promise in 1986 of compulsory YTS experience for school leavers set off the largest student strike in British history. It would certainly appear, then, that self-selection of new entrants into other employment or training paths and of employers into other avenues for hiring may have helped make YTS the conduit for lower quality trainees and positions.

The negative perceptions of school leavers toward YTS, compared to employment or regular training programs, may well have been related to the program's often ambiguous status as both a training and a youth unemployment scheme. The initial view of many YTS providers was that they were participating because of their social concern about youth unemployment (see below). These negative perceptions appear to have abated—at least no references to them can be found—over time as the program became more established and, most importantly, when alternative routes to jobs were in short supply. The lesson may be that the fewer established routes there are into training and jobs, the less likely that new programs like YTS will end up as the lower track.

The most common complaints about tracking, however, were directed within the YTS program itself. Cockburn (1987) observes that YTS placements mirrored the sex-based nature of occupations in the labor market. Government figures indicate that about 60 percent of all women YTS participants were concentrated in two of the 19 standard occupational categories—administrative/clerical and health/personal services, traditional female occupations (Cope 1988, p. 144). Lee et al. (1990) find that provider selection practices meant that participants with the lowest prospects ended up with the least desirable placements. In other words, YTS did nothing to overcome or offset the

sorting and tracking that typically occurred in the entry-level labor market.

Substitution Effects. Another concern about programs like YTS is the effect that they have on the employment of existing workers. Specifically, did cheaper (essentially free) YTS trainees become substitutes for full-time workers? The Trades Union Congress (TUC) was concerned that the trainees would undercut union jobs, and at least four of its member unions opposed it for that reason (Ainley and Corney 1990, p. 79). There were isolated examples of local unions refusing to allow YTS trainees into shops for work experience for fear that union jobs were at risk (see, for example, IDS 1984). The TUC, however, supported YTS as part of its general interest in manpower planning and expanding training.

Early surveys indicate that employers had converted about 50 percent of all their long-term training spots to YTS, suggesting some substitution for existing training (Department of Employment 1985). Lee et al.'s (1990) interviews find that employers were more likely to offer YTS places than jobs—sensible given the subsidy—suggesting some substitution for permanent jobs as well.

Self reports from a 1985 survey of YTS providers indicate that for every 100 YTS positions added, a provider reduced its existing training spots by nine positions and full-time employment by eight (Sako and Dore 1986). These losses seem relatively small. Begg et al. (1991), however, find substantially larger effects in a 1989 survey of 250 establishments participating in YTS: for every 100 YTS places created, employers cut back 71 existing training positions but only 9 full-time jobs. The reductions in training positions were larger for firms over 100 employees (73 percent v. 53 percent for employers with less than 100 workers), while the reductions in jobs were larger for smaller employers (5 percent for firms over 100 but 15 percent for firms with less than 100 employees). The fact the Begg et al. (1991) survey was examining YTS after it had become a two-year program may account for the larger effects. The longer time commitment and the lower subsidy of the two-year YTS no doubt made it more difficult for providers to create YTS spots and led to greater substitution. The most important difference in the two surveys, however, may be that the economy was in expansion during the former and recession during the latter. The offsetting effects of YTS appear smaller when jobs are expanding anyway and larger when they are contracting.

Skills Learned. One of the major goals—if not the goal—of YTS was to raise the skills of the participants. Attrition (see below) may have been the most important hindrance to acquiring skills, but securing skills and credentials was a problem even for trainees who stayed with YTS. Jones (1988) finds that fewer than one-quarter of participants in the one-year YTS got any credentials, and those typically received only the completion certificate. On the other hand, he concludes that this figure still represents a substantial increase over the expected level in the absence of YTS. Marsden and Ryan (1991) conclude that only 27 percent of participants received credentials in 1987. The proportion receiving some credential apparently rose substantially when the program expanded to two years: Keep (forthcoming) reports that 41 percent of participants received credentials in 1990, although five out of six of those represented the very lowest skill levels. Cutbacks in YTS (see below) apparently also reduced the rate of credentials to 33 percent by 1992. In a study within a single industry, Steedman (1988) examines skills in the mechanical and electrical industries and finds that YTS had not led to any increase in credentials there, suggesting that YTS positions may simply have substituted for traditional apprenticeship positions.

It may also be possible to learn something about training quality by looking directly at the nature of the train-

ing. Under the one-year YTS, 41 percent of all work placements were in retail, a low-skill sector of the economy that employs only 20 percent of all workers (*Employment Gazette* 1985). Lee et al. (1990) conclude that YTS led to an expansion of training only among low-cost programs. The subsidy was *not sufficient to encourage an* expansion of the high-quality programs. And when the subsidy declined, providers became much more selective about who they took. Bynner and Roberts (1992, p.105) also find that the level of training provided by employers was higher when labor markets were tight and there was competition for workers. Training was offered as an enticement to get school leavers to take YTS placements. When markets were slack, there was a greater tendency to use the trainees as cheap labor and not to provide training.

Enforcing the provision that the work experience should provide real training proved a difficult undertaking. The Manpower Services Commission and the Area Boards had the power to approve program structures in advance, but providers complained that the program administration was too rule-bound in defining the training and work experience that it would accept. Where the real difficulty lay, however, was in monitoring what happened *within* the programs. Providers argued that YTS monitors were unqualified to judge what was appropriate work experience (as opposed to cheap labor) in particular work settings and that their monitoring was both ineffective and destructive (IDS 1986). Where Managing Agents subcontracted the work experience, the Agents themselves found it very difficult to monitor what kind of training was actually provided in the work setting (IDS 1984). The main effort to monitor work experience was to ask providers and trainees to keep records of what they were doing. Lee et al. (1990, p.65) find that these efforts were a failure and that accurate, informative records were rarely available.

Keep (1986) argues that the poor quality of training was in some ways an inevitable result of the speed with which the YTS program was assembled. Because the program relied on employers to create the placements and required that they produce them immediately, the employers, through the Confederation of British Industry, basically demanded as a *quid pro quo* that there be no interference or regulation of the work experience that would burden employers or tie their hands. And because YTS got going before any of the credentialing systems for education and training were in place, it was difficult to use "outcomes" as a measure of the success of the YTS experience.

Perhaps the best news about YTS skills comes from the Bynner and Roberts (1992) comparison of YTS participants with German apprentices. They find, surprisingly, that YTS participants actually developed more directly work-relevant skills and abilities than their German counterparts, apparently because they were thrown immediately into real tasks. These skills tended to be job- and firm-specific in Britain, however, and were not the kind of general skills based on academic principles that were the program's goals.

Obtaining Jobs. If raising skills was the official priority of YTS, then getting participants into jobs and out of unemployment was surely the unofficial priority. Here the program seems to have done very well, in large part because it served employers' interests. The 1985 survey asked employers what advantages they saw for their organization from YTS, and far and away the most common response (42 percent) was help in screening new hires (Sako and Dore 1986). Three-quarters of the providers in the 1984 survey said that YTS would be their main method of recruiting in the future (*Employment Gazette* 1985). Begg et al. (1991) conclude from their 1990 survey of employers—YTS participants or not—that employers

were interested in YTS to help with their entry-level recruiting.

On the other hand, if the training provider did not offer a participant a job, YTS seemed to provide little help in securing employment elsewhere. The 1985 survey of *firms found that only 42 percent of employers even* asked for YTS credentials from applicants that they knew had participated in YTS (Sako and Dore 1986). Lee et al. (1990, p. 124) find that if trainees were not hired by the firm that provided their training, they had great difficulty in securing a job.

Perhaps the best overall assessment of YTS performance in helping participants get jobs is the associated change in youth unemployment rates. Before YTS, youth unemployment among the 16- to 19-year-old age group averaged almost twice that among the 20- to 24-year-old age group (this was also roughly the case for most O.E.C.D. countries). By 1988, the fifth year of YTS, youth unemployment among the 16-19 group where YTS was targeted had actually fallen *below* that of the 20-24 age group, 10.3 v. 12.9 percent, respectively; by 1989, the margin had widened further to 5.6 v. 10.1 percent. The only other O.E.C.D. country with lower unemployment among 16- to 19-year-olds than 20- to 24-year-olds has been Germany (see O.E.C.D. 1992, Table L). The scale of apprenticeship/YTS programs targeted at the 16-19 age group in both countries seems to explain the relationship.

The fact that providers hired YTS participants certainly helped ease their transition to the workplace, but it was the major cause of high drop-out rates from the program and, in turn, the failure to earn skill credentials. Ainley and Corney (1990, p. 78) report press accounts that, in some places in the early 1980s, two YTS participants were dropping out for every one coming in. Marsden and Ryan (1991) report that in 1988, 80 percent of participants dropped out before completing the YTS program in large part because they were offered full-time jobs. Several observers note that the drop-out rates varied with labor market conditions and that attrition was significantly higher when labor markets were strong. The expansion of YTS to two years obviously increased attrition rates (i.e., it is harder to stay with a program that is twice as long). Lee et al. (1990, p. 153) find more employers pulling trainees out of YTS and into full-time jobs when the program went to two years.

Changing Employer Behavior. As noted earlier, one of the goals of YTS was to change employers' behavior, to alter their notions about the importance of training and skills in production, and to facilitate the move to more flexible, higher-skilled systems of work organization. There is little evidence that it had this effect.

The best evidence on how providers viewed YTS comes from the 1985 survey of providers (Sako and Dore 1986). When asked why they participated, the most common response was because of social concerns, "to help young people" (45 percent). When asked what advantages they saw for themselves from YTS, the most common responses were, as noted above, screening new hires (42 percent) and saving on labor costs (32 percent) because of subsidized trainee labor. These items were also the most important "unanticipated advantages" reported by providers (23 and 16 percent responding, respectively). There is no mention of interest in raising skill levels or helping to change work organization.

Small employers in particular seemed to believe that the only advantage of YTS was in getting labor. Lee et al. (1990, p. 69) find two-thirds of small employers saw off-the-job education as a nuisance and that virtually none had any interest in the YTS Certificate. They also find that small employers in particular resisted efforts to have trainees rotated to other organizations for broader work experience—indeed, they resisted the off-the-job training

because it took the trainees out of work (p. 65). In one YTS program, small employers could not be persuaded to release their trainees voluntarily for 1-1/2 days of off-the-job training per week even when the employers were offered as compensation for the lost time additional payments equivalent to their entire subsidy from YTS! (IDS 1984). The reason appears to be that these employers integrated the trainees so thoroughly into the workplace and work flow that having them leave a small organization, even temporarily, was extremely disruptive.

There was a clear concern among many employers that the jobs that they hoped their YTS trainees would eventually fill did not require enough skills to keep the participants occupied as trainees. The most common response to the question about why employers chose not to participate in YTS in the 1985 survey was not having any work situations that were suitable for trainees (24 percent; Sako and Dore 1986). Interviews with managers suggest that it became especially difficult—for many impossible—to provide training content that would keep the participants occupied when YTS expanded to two years (Milton 1986). This is the experience that one would expect if YTS trainees were working on relatively low skilled tasks.

Further, there is no evidence that YTS caused employers to increase the importance they attached to training. The landmark study of employer attitudes toward training, *Challenge to Complacency* (Coopers and Lybrand 1985), concludes that British employers in general saw little benefit from raising skill and training levels even after YTS was in place. Ainley and Corney (1990, p. 116) conclude that at the end of YTS, the problem was still to persuade employers to spend money on training. Studies of British industries like Jarvis and Prias' (1989) find that British employers still want job-specific training, not the more general skills promoted by YTS. Finally, Keep and Mayhew's (forthcoming) survey of employment and work organization finds little evidence of wide-spread upskilling of work organization or increase in the level of training associated with the YTS period. Indeed, there is evidence that some sectors of the economy may see skill requirements falling.

The End of YTS

YTS was renamed the Youth Training Program (YT) in 1989, and the two-year requirement was dropped as was the 20 weeks of off-the-job training. Area Manpower Boards, whose representatives came from labor, education, and the community as well as industry, gave way to employer-led Training and Enterprise Councils (IDS 1991). The completion certificate was abandoned for the goal of having trainees strive for other, nationally recognized, occupational credentials. The payment structure was also changed. Employers now paid the trainees' living allowance out of the subsidy and kept whatever remained. And the subsidies were reduced toward the goal of having employers ultimately pay all the costs of training themselves.

The current plan is to completely replace YT by 1996 with a program of vouchers given to school leavers called Training Credits. The program was essentially conceived by the Confederation of British Industries (CBI 1989) as an attempt to create a market for training. School leavers trade the vouchers to employers in return for a position that offers training. The employers then receive a subsidy from the government for each voucher. The program is still in the pilot stage, but it has been difficult so far to get employers to offer positions (Employment Department 1992).

What killed YTS? In 1988, the government concluded that YTS was a "resounding success" (Department of Employment 1988) but basically dismantled it the next year. Perhaps the main factor was that youth unemploy-

ment temporarily disappeared with the economic expansion in 1989 and the decline of the baby boom. And the basic conservative view about reducing government intervention in employment dominated once youth unemployment declined. In part, the abandonment was also due to a change in the politics of education reform, especially within the Conservative Party, where a "back to basics" movement ended the interest in vocationalism.

Most important here, YTS did not enjoy enough support from employers, the natural constituency of the Conservative government in power. The fact that the subsidy had been scaled back considerably no doubt reduced their support. And they disliked the government's efforts to dictate what should be taught through the work experience component as well as the increasingly bureaucratic rules associated with efforts to enforce training provisions.

A thumbnail sketch of the experience with YTS suggests that it was good at helping school leavers get work experience and find jobs, not especially good at helping them acquire general skills (especially securing credentials), and had little effect on the long-run employment and work organization practices of employers.

An Analysis of the YTS Experience

The first general lesson from YTS is that the program's mechanisms placed the goal of helping secure employment and the goal of increasing general skills in conflict. What employers got out of YTS was mainly the ability to screen and select new hires. That was the price paid to get their participation. Screening and hiring, however, were the major causes of attrition from training, in turn a major cause of the failure to secure credentials. Staying in YTS essentially kept participants available to be hired in the outside labor market, and allowing them to complete general skills training simply made them more valuable to other employers, making it easier for them to leave. So employers pulled the desirable participants out of YTS and into jobs in order to keep them.

Another example illustrates the problem. As noted earlier, YTS trainees getting experience in small organizations typically rotated across employers in order to acquire a wider background of skills. (Trainees in large, diverse operations could simply rotate within the organization.) Small employers resisted this rotation not only because the original providers had no interest in broader skills but also because rotations would increase the exposure of trainees to the labor market and reduce the probability that the original provider would be able to keep them on.

Indeed, the current employer actually had an interest in having the trainees it would like to hire *fail* to achieve skill credentials. Such credentials signaled competencies, but the current employer already knew what the trainee could do. So credentials only signaled competencies to competitors and helped them hire the trainees away. Further, if employers were pulling the participants they wanted to hire out of YTS, then the fact that a trainee actually completed YTS and then looked for a job implied that their employer did not want them. In that sense, the YTS credential became a negative signal about the trainees and may explain why the YTS experience did not seem to help them find jobs with other employers in the outside market.

Allowing employers to use YTS as a screen for employment—offering places to desirable participants and then hiring them—also perpetuated the biases that are already present in the labor market. These include the concerns about tracking noted above.

The second general lesson is that the financial incentives associated with YTS and, in fact, with apprenticeship programs in general, not only fail to create incentives

to provide general skills training but may in fact create incentives not to do so.

The usual arguments about general skills state that employers cannot earn a return on them after the fact (given that they raise wages and productivity equally), so if the employer provides them, the costs must be borne elsewhere (Becker 1975). Under YTS, the government paid a subsidy to employers before the training began, essentially creating an agency problem. Because the employer got the money first, there was no incentive short of administrative monitoring to alter what they would otherwise do in the absence of such subsidies—no incentive to provide general skills training or indeed training of any kind. The subsidy may offset the financial disincentive to provide training if the employer is otherwise inclined to provide it, but it creates no incentive to train. So the government has the difficult problem of setting standards for training and then attempting to monitor to see whether those standards are being met. The evidence above suggests that this was a difficult task that employers resented.

The other incentive for employers is to earn something from the labor of the trainees, to get work of more value out of them than the cost of the training provided. One sure way to increase that return is to reduce the cost of the training, perhaps by providing less of it. Again, the burden is on the government through administrative means to ensure that the providers do not act on these incentives. Where skills were taught, they tended to be those minimally necessary to perform the productive work that trainees were currently doing. These skills were often specific to the employer.

One of the worst aspects of these incentives was that they worked against what was the most important factor pushing providers to participate in YTS, their sense of social responsibility. The structure of the subsidy put providers in the position of having to work against profit-maximizing behavior if they wanted to be socially responsible and invest in the trainees.

Reforming Work. One of the goals of YTS was to help employers move toward more efficient and flexible operating systems based on higher-skill, broader jobs. In fact, YTS may actually have created incentives that retarded efforts to reform work. The program essentially provided employers with a steady stream of new trainees whose initial experience and training with the company were virtually costless. The cost of screening and recruiting new workers—the cost associated with turnover—is therefore substantially reduced. When turnover costs fall, employers have an incentive to reduce actions that hold turnover down (such as paying higher wages or providing training) and, other things equal, let turnover rise. High turnover can severly disrupt work reforms like team work and quality of work-life programs that are at the heart of high performance work systems. It also makes investments in even firm-specific skills difficult to finance.

The incentives created by YTS and YT may also affect the choice of production regimes. Because trainees can perform unskilled or low-skilled tasks, programs like YTS effectively lower the cost of such unskilled labor essentially to zero. By lowering the price of unskilled labor, YTS raises the relative cost of using skilled workers. When firms have choices about production regimes, therefore, the lower-skilled option becomes substantially cheaper and more likely to be chosen.[21] As measured by the substitution effects reported above, YTS had not produced a dramatic shift in the mix of employment. On the other hand, the period over which the effects were measured was very short. The effects might be much larger over the long run when, for example, employers confront decisions about changing products or capital equipment where the effects on work organization are more dramatic.

Where YTS and YT contributed to work reform, it is likely to have been because of skills learned in the classroom, not in work experience. What employers can offer for work experience is their status quo, which is often a traditional work system. The fact that such experience can even be a hinderance in learning new systems is illustrated by the "greenfield" strategy pursued by many employers of staffing new, innovative facilities with workers who have no prior experience in that industry—no expectations and habits that need to be undone. Classroom instruction, in contrast, can focus on basic skills that transcend specific work systems, including those that will inevitably replace "high performance" approaches.

The question of work reform relates to the general issue raised earlier about the nature of the labor markets with which YTS must interact. While YTS sought to generate general occupational skills useful in external labor markets, evidence from providers (see also Deakin and Pratten 1987) suggests that they were interested in YTS trainees as a way of filling entry-level positions in their internal labor markets. Bynner and Roberts (1991) find that YTS participants saw their career prospects tied to promotion within a firm. As a result, they saw YTS as a means to get a job, to get into the internal labor market, and not to prepare for a future career. That helps explain why YTS participants were perfectly willing to abandon the program if a permanent job came along.[22]

A program designed to supply general occupational skills to employers whose demand is for entry-level internal labor market positions suggests a fundamental mismatch. The entry-level jobs in internal labor markets typically require little skill, which explains why the employers were complaining that there was not enough training content to keep YTS trainees occupied, especially over a two-year program. Because the jobs that YTS trainees would fill required little skill, the employers had no interest in providing high levels of training, levels beyond what those jobs required. In the long run, employers may benefit by having workers with broad and higher levels of skill in their organizations. But the main problem facing YTS was that employers effectively controlled training levels (in part by pulling participants out of training and into jobs) and saw no incentives to provide levels of training beyond what their current jobs required.

An Alternative Model

The lessons above suggest the great difficulty facing any training program that cuts against the grain of existing employment practices and labor markets. Countries like the U.S. with youth labor markets similar to Britain's face the following options. First, youth unemployment may be effectively addressed with hiring or employment subsidies targeted at youth. The move to YT and now Training Credits in Britain appears to be a complete abandonment of efforts to increase general skills in favor of straightforward employment subsidies to address youth unemployment.

Second, efforts to raise skill levels through work-based learning must come to grips with the fact that employers basically control that learning through their choices about work experience, training, and hiring. Employers must have clear incentives to provide high skills. Mandates and monitoring are unlikely to prove effective, and there is always the danger, as illustrated above, that subsidies may create perverse incentives. The problem of incentives is even more acute when the goal is to provide levels of skill above those which the employers currently need.

Financial subsidies might better take the following form. Instead of paying the employer in advance of training (and then hoping for the best), a better option is to tie subsidies to the completion of general skills credentials. Providers receive payments tied to the completion rates of

their trainees, aligning the interests of providers, trainees, and the agencies offering the subsidies. Employers and trainees may still decide to cut the program short and go directly into employment, but they would not then benefit from a subsidy whose purpose was to raise skills. Such an arrangement demands, however, that occupational credentials already be in place.

A related problem with subsidies is their size: if the subsidy has to fund the entire costs of training, the program might be prohibitively expensive. The size of the required subsidy depends in part on what else the employer/provider gets from the program. As noted earlier, employers typically earn a return on organization-specific training by receiving work of greater value from the employee than the wages they must pay. Employers keep earning a return (subject to diminishing returns) as long as the employees stay with the employer. The theoretical distinctions between general skills and organization-specific skills blur in practice so that efforts that increase tenure may increase the returns from and the interest in providing both kinds of training. The British experience also suggests that traditional training subsidies can create incentives to churn the workforce, which works against efforts to introduce higher-skilled, "high performance" work systems. Subsidies structured to reduce turnover might address this problem as well as the financial disincentive to train.

One alternative would be to pay subsidies based on completion rates in the form of a wage premium—either directly to the employee or to the employer—for some period of time on the condition that the worker and the employer are still together. This arrangement allows the employer to pay below the value that the skills produce (the market wage) in order to recoup its investment in training while the workers receive total compensation equal to their market wage. Because both the employer and the employee are better off with this match than with any other, turnover should be reduced. Lower turnover, in turn, increases the incentives to invest in training and removes one of the important barriers to introducing new work systems.

The third issue relates to the different labor market structures in the work place. As noted earlier, it is much easier to set skill standards and establish credentials for occupation-based labor markets than for internal labor markets. Further, the entry-level jobs in many internal labor markets—where trainees would logically have to be placed—are often so unchallenging as to limit what trainees can learn from work experience in them. Yet the British experience also suggests that employers have the greatest interest in having trainees in these jobs because they can quickly perform work of value. Back-loaded subsidies based on achieving credentials reduces the incentives to have trainees working rather than learning skills, but it does not address the problem of jobs that offer few skills.

One option is to make the length and associated subsidies of the training programs vary with the nature of the jobs. The YTS program had different subsidies tailored to the cost of training in different occupations, but because the length of the program did not vary, trainees in low-skill jobs soon ran out of things to learn. Differential subsidies also decrease the incentives to pitch the programs toward low-skill jobs. To compensate for lower levels of work experience, trainees in these jobs could receive more off-the-job education.

Finally, the best news about programs like YTS is how quickly it appears that they could be put in place. Without relying on any established business or education networks to set up programs, YTS nevertheless created a national program almost overnight: the sense of national urgency provided by the riots in 1981 no doubt sped up

that process. The innovation of allowing for-profit managing agents to put together the disparate elements needed for a program seemed to work quite well in Britain. It could work even better in the U.S. where for-profit proprietary schools are already well established and perform somewhat similar roles. It does not appear necessary, then, to have Private Industry Councils or other business/education structures in place in order to develop programs that bridge school and work. Both potential trainees and potential training providers can be mobilized almost immediately by a government program that creates the right incentives.

Footnotes

[1] In the U.K., see National Economic Development Office (1984) and Finegold and Soskice (1988); in the U.S., see Office of Technology Assessment (1989) and National Center on Education and the Economy (1990). The National Advisory Commission of the U.S. Department of Labor's Office of Work-Based Learning was established to pursue the implications of this argument. Whether the argument is true empirically as well as logically may not yet be demonstrated. How much of a premium flexible, high quality production can support is not clear, nor is the extent to which high skills (and higher than what level) are necessary to achieve them. The most rigorous evidence for this position comes from the auto industry (Womack et. al. 1992) where the evidence suggests only that flexible production requires skills higher than those associated with traditional assembly line techniques, not that increasingly higher levels of skills, as in craft work, would lead to higher production. Nor is it clear how these arguments translate to settings other than manufacturing.

[2] For examples of arguments asserting that the U.S. should learn from the school-to-work arrangements in these countries, see Office of Technology Assessment (1989), National Center on Education and the Economy (1990), and William T. Grant Foundation (1992). See also "School to Work Transition Strategies" (1992).

[3] Efforts to raise skills can take place in schools (before students enter work) and on the job (after they are employed) as well as in "bridging" programs, and efforts to raise work-related skills are taking place at these other levels as well. The National Goals for Education and the Secretary's Commission on Achieving Necessary Skills (SCANS 1992) put forward the case for work-related education reform in the U.S. by advocating curricula that develop applied skills and set national standards (and exams) for achieving them. In Britain, these arguments began in 1975 (see MSC 1975) and included National Education and Training Targets, national "core curricula" on the German model, and national tests of achievement. The discussions in the U.S. about a payroll tax for training that employers would either pay or provide the equivalent in training have their parallel in Britain's Industrial Training Boards which did the same thing within industries between 1964 and 1988 (see below).

[4] The most recent legislation is the "School-to-Work Opportunity Act" of August 1993 that was introduced in both the House and Senate and would allow for a variety of alternative school-to-work arrangements. "The National Youth Apprenticeship Act of 1992," was a draft bill introduced in the House that would require the States to develop apprenticeship programs, combining academic material and work-based learning for 11th and 12th grade students and would provide federal funds to support those programs. "The Youth Apprenticeship Act," in contrast, would establish a national (rather than state-based) system along similar lines.

[5] The U.S. Department of Labor created an Office of Work-Based Learning in the mid-1980s, and one of its main projects has been to support pilot apprenticeship programs. The Pew and Sloan Foundations have also been active in funding apprentice-style programs. "Jobs for the Future," a Boston-based organization, is devoted largely to developing youth apprenticeship programs.

[6] Evidence about the interest that U.S. employers have in providing youth apprentice work experience is presented in "Oversight Hearings... "(1992).

[7] Unemployment for the aged 16-24 youth cohort in the U.K. and the U.S. in 1979 (when the discussion below begins) were 10.3 and 11.3 percent, respectively; in 1988 (when the discussion ends), they were 11.8 and 10.6 percent. Both countries rank about in the middle of the 16 Organization of Economic Cooperation and Development (O.E.C.D) countries in youth unemployment over the past decade or so. See O.E.C.D. (1992, Table L, p. 279).

[8] Begg et al.'s (1991) survey reports that more than one-third of the firms reported skill shortages in nine skilled and semi-skilled occupations.

[9] Stuart Holland, then head of the Manpower Services Commission, referred to the target group of students who head straight for employment in Britain in similar terms, as "that third of any age group whom we have neglected for too long" (see Ainley and Corney 1990, p. 42).

[10] Surveys during the 1980s, for example, found that as many as one-third of British employees reported that they have never had *any* training (Training Agency 1989, p.9). Further, only half of firms that reported skill shortages increased their training (Training Agency, p.42).

[11] Keep (1990) summarizes the influence of comparative examples on the British training debate.

[12] Evidence about the change in labor relations practices in the U.K. comes from the longitudinal Workplace Industrial Relations Surveys (Millward et al. 1992).

[13] The vast majority of students traditionally left school before age 16 for the workplace, leaving little time to acquire academic skills that might provide the foundation for vocational training; those who stayed on studied discipline-based, academic subjects (O- and A-level courses) to prepare for university educations where the orientation was strongly toward the arts, pure science, and, somewhat later, social sciences. Twentieth Century reform

efforts included the creation of technical schools, founded as part of 1944 Education Act to provide vocational education. But the few that were created disappeared in the 1960s, incorporated into new "comprehensive" schools as part of an effort to democratize education and eliminate tracking. Polytechnics, higher education schools created in the 1960s and 1970s to pursue applied sciences and technical education, soon became like traditional universities, emphasizing arts and disciplines. The polytechnics were all renamed as "universities" in the 1990s. Perry (1976) argues that further education colleges, which grew as a result of industry demands for off-site training that the polytechnics were not providing, were not used much by firms. See Sheldrake and Vickerstaff (1987) for a history of the relations between industry and education and training.

[14] One reason for the decline may have been the rise in the relative pay, therefore cost, of apprentices. Strikes driven by apprentices to raise pay contributed directly to that increase as did reductions in the length of apprenticeships—from five to 3.5 years (see Jones 1984; Marsden and Ryan 1990). Marsden and Ryan (1991) report that pay for young male workers in Britain rose faster than in any other country between 1966 and 1978 and that apprentices as a proportion of the labor force fell from 3 percent in 1966 to 1.2 percent in 1986. Some of this decline, however, may have been the result of converting apprenticeships to YTS programs (see below).

[15] See Atkinson (1985). The program had a range of critics. Gregory and Noble (1982) noted that it would cost adults jobs and reduce unionization of youth by placing them outside the usual work setting. Schools were concerned that it would track low ability students and that the higher financial allowances received by YOP participants would pull full-time students out of school and into the program.

[16] The providers could grant the trainees employee status if they wished, although only about 4 percent of trainees entered the program with that status. Further, the government had to grant employers relief from the minimum wage provisions of industry Wage Councils that applied to 17- and 18-year-olds when YTS expanded to two years (IDS 1986).

[17] The NCVQ is an independent, nongovernmental body that sets standards for qualifications, coordinates the qualifications established by industry groups, and issues accreditations to those groups. It also maintains a data base identifying all of the credentials and one that records the credentials of every individual who has participated in the process. It is successful to the extent that it can persuade employers to accept and use its standards.

[18] The original structure of YTS is set out in "The Youth Training Scheme" (1981). See also IDS (1984) for the administrative practice as it finally developed. The Department of Education and Science (1985) provides the government's case for the two-year YTS and its set-up. IDS (1986) discusses the administrative arrangements of the two-year version in practice.

[19] They began in 1984 at £1,950 per position, then were reduced to £770, and finally to £610 in the first year of the two-year YTS and £210 in the second.

[20] These changes were also part of a more important political agenda of essentially eliminating youth unemployment among this age group—at least in the reported statistics—by changing the reporting rules to not count jobless 16- to 17-year-olds who refused YTS places as unemployed.

[21] Cappelli (1993) provides some evidence for this, finding that changes in skill requirements among employers tended to vary with changes in area wages: higher wages led to higher skills, perhaps because high skills substitute for additional workers.

[22] Marsden and Ryan (1990) argue that British labor markets have more of an occupational nature as compared to Italy and France where labor markets are more internal. But the issue is whether they are occupational enough to sustain broad-based occupational training. Sako (1991) also argues that the entire occupational focus may be misplaced and that perhaps we should be encouraging training within internal labor markets.

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